

WHAT IS CLAIMED IS:

1. An antenna apparatus, comprising:
  - a dielectric substrate made of a dielectric material;
  - a flat-plate radiation element buried inside the dielectric substrate at its center portion;
  - a feeding lead connected to the radiation element and extracted outward from a rear surface of the dielectric substrate through the inside thereof; and
  - a conductor cover covering at least side surfaces of the dielectric substrate;

the conductor cover having a side wall portion extending in a thickness direction of the radiation element and covering all of the side surfaces of the dielectric substrate, and at least one hood portion extending from an upper edge of the side wall portion and covering a part of a front surface of the dielectric substrate.
2. An antenna apparatus according to claim 1, wherein the dielectric substrate has a shape of a rectangularly configured body.
3. An antenna apparatus according to claim 1, wherein:
  - the hood portion having a trapezoidal shape whose base is coincident with a peripheral side of the front surface of the dielectric substrate;
  - the front surface of the dielectric substrate having an exposed portion which is not covered with the hood portion, the exposed portion having a rectangular center portion and a plurality of strip-like peripheral portions extending outward from a plurality of corners of the rectangular center portion along diagonal lines.

4. An antenna apparatus according to claim 1, wherein:  
the hood portion having a rectangular shape whose base is coincident with a peripheral side of the front surface of the dielectric substrate;  
the front surface of the dielectric substrate having an exposed portion which is not covered with the hood portion, the exposed portion having a rectangular center portion and a plurality of rectangular peripheral portions having inner corners which overlap four corners of the rectangular center portion, respectively.
5. An antenna apparatus according to claim 1, wherein the radiation element has a rectangular shape.
6. An antenna apparatus according to claim 5, wherein the radiation element has a six-sided shape obtained by trimming the rectangular shape by cutting off two corners opposite to each other along a diagonal line.
7. An antenna apparatus according to claim 5, wherein the rectangular shape is a square shape.
8. An antenna apparatus according to claim 1, wherein the dielectric substrate, the radiation element, the feeding lead, and the conductor cover are formed into an integral structure.